From: <brian.whinray@power.alstom.com>
To: <aaron-n@ipsc.com>
Date: 7/31/02 6:43AM
Subject: Conference Call July 31 at 9.00 a.m.

I confirm our follow up conference call at 9.00 am your time today.

I have prepared some information to help the discussions and I am presenting it in this e-mail to help you digest it before the meeting.

The design flow margin is 0%.
The manufacturing tolerances on design nominal guide blade throat ares are:

stage 1	+2% to -0%
stages 2 - 8	+2% to -2%

3. The measured throat areas on Unit 2 HP cylinder compared with design nominal guide blade throat areas for Unit 2 are:

.3% higher flow

Diagrams (guide blades)
Restaging (relatively small impact on flow)

stage 1	+0.61%
stage 2	+0.15%
stage 3	+0.19%
stage 4	+0.51%
stage 5	+0.42%
stage 6	+0.57%
stage 7	+0.33%
stage 8	+0.16%

4. We have calculated the effect of these variations in guide blade throat areas on cylinder flow capacity and an increase of 0.3% would be expected. In interpreting a 'rate of exchange' it should be realised that stage 1 throat area has the greatest effect on capacity and stage 8 the least.

5. Factors other than guide blade throat area will affect flow capacity. However, our experience shows that we expect to achieve the design flow capacity within a tolerance of +1% -0% including the effects of manufacturing variations.

Regards

Brian Whinray

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